- of the low risk patients, a substantial improvement of symptoms can be achieved by PCI of the culprit lesion, and even complete revascularisation may be considered.
- ▶ In patients with stable angina and an intermediate or high risk according to risk stratification, a decision has to be made when intensified medical treatment is without satisfactory effect. However, the potential benefit of PCI has to be weighed against the elevated risk for perinterventional complications.
- ▶ In acute coronary syndrome settings, in urgent situations, risks are generally high for elderly patients. However, in these situations, the potential benefit of PCI increases towards those patients of the highest risk groups. Therefore, when the patient appears healthy enough to leave hospital and return to a meaningful life at home, one has to weigh the elevated risks against the increased potential benefit in this high-risk group. However, reperfusion therapy by PCI is the preferred strategy, both in patients with or without ST elevation.

Authors' affiliations

J Kaehler, T Meinertz, Department of Cardiology, University Hospital Eppendorf, Hamburg, Germany

C W Hamm, Department of Cardiology, Kerckhoff Heart Center, Bad Nauheim, Germany

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REFERENCES

- Kaehler J, Luetke M, Weckmueller J, et al. Coronary angioplasty in octogenarians. Quality of life and costs. Eur Heart J 1999;20:1791-8.
 Batchelor WB, Anstrom KJ, Muhlbaier LH, et al. Contemporary outcome
- 2 Batchelor WB, Anstrom KJ, Muhlbaier LH, et al. Contemporary outcome trends in the elderly undergoing percutaneous coronary interventions: results in 7,472 octogenarians. National Cardiovascular Network Collaboration. J Am Coll Cardiol 2000;36:723-30.
- Contemporary registry of 7400 octogenarians and 102 000 younger patients describing the relative contribution of several age-related risk factors.
- 3 Pfisterer M. Long-term outcome in elderly patients with chronic angina managed invasively versus by optimized medical therapy: four-year follow-up of the randomized trial of invasive versus medical therapy in elderly patients (TIME). Circulation 2004;110:1213–8.

- 4 Seto TB, Taira DA, Berezin R, et al. Percutaneous coronary revascularization in elderly patients: impact on functional status and quality of life. Ann Intern Med 2000:132:955–8.
- Study comparing health related quality of life of 300 elderly to 1150 younger patients, demonstrating similar improvement following PCI for stable angina.
- Baskett R, Buth K, Ghali W, et al. Outcomes in octogenarians undergoing coronary artery bypass grafting. Can Med Assoc J 2005;172:1183-6.
 Alexander KP, Anstrom KJ, Muhlbaier LH, et al. Outcomes of cardiac surgery
- 6 Alexander RP, Anstrom KJ, Muhlbaier LH, et al. Outcomes of cardiac surgery in patients > or = 80 years: results from the National Cardiovascular Network. J Am Coll Cardiol 2000;35:731-8.
- 7 Graham MM, Ghali WA, Faris PD, et al. Survival after coronary revascularization in the elderly. Circulation 2002;105:2378–84.
- Registry of > 6000 elderly patients with long-term follow-up demonstrating greater absolute risk reduction than in younger patients associated with surgical or percutaneous revascularisation versus medical treatment.
- 8 Collinson J, Bakhai A, Flather MD, et al. The management and investigation of elderly patients with acute coronary syndromes without ST elevation: an evidence-based approach? Results of the prospective registry of acute ischaemic syndromes in the United Kingdom (PRAIS-UK). Age Ageing 2005;34:61-6.
- 9 De Servi S, Cavallini C, Dellavalle A, et al. Non-ST-elevation acute coronary syndrome in the elderly: treatment strategies and 30-day outcome. Am Heart J 2004:147:830-6.
- 10 Bach RG, Cannon CP, Weintraub WS, et al. The effect of routine, early invasive management on outcome for elderly patients with non-ST-segment elevation gaute coronary syndromes. Ann Intern Med 2004:141:186–95.
- elevation acute coronary syndromes. Ann Intern Med 2004;141:186-95.
 Randomised trial with 2200 patients with acute coronary syndrome demonstrating significant benefit of an early invasive strategy in elderly patients.
- 11 Guagliumi G, Stone GW, Cox DA, et al. Outcome in elderly patients undergoing primary coronary intervention for acute myocardial infarction: results from the controlled abciximab and device investigation to lower late angioplasty complications (CADILLAC) trial. Circulation 2004;110:1598-604.
- Current study of abciximab and stenting in 740 elderly patients, demonstrating the pronounced age-related increase of mortality in patients with acute myocardial infarction.
- 12 Berger AK, Schulman KA, Gersh BJ, et al. Primary coronary angioplasty vs thrombolysis for the management of acute myocardial infarction in elderly patients. JAMA 1999;282:341–8.
- 13 O'Neill W, de Boer MJ, Gibbons RJ, et al. Lessons from the pooled outcome of the PAMI, Zwolle and Mayo Clinic randomized trials of primary angioplasty versus thrombolytic therapy of acute myocardial infarction. J Invasive Cardiol 1998;10(suppl A):4A-10A.
- 14 Mehta RH, Sadiq I, Goldberg RJ, et al. Effectiveness of primary percutaneous coronary intervention compared with that of thrombolytic therapy in elderly patients with acute myocardial infarction. Am Heart J 2004;147:253-9.
- 15 Sadeghi HM, Grines CL, Chandra HR, et al. Percutaneous coronary interventions in octogenarians. glycoprotein Ilb/Illa receptor inhibitors' safety profile. J Am Coll Cardiol 2003;42:428–32.

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